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1. A multi-beam optical scanner
comprising:

a light source for [a multi-beam]

providing a pair of light beams;

[a coupling lens for coupling a
plurality of light fluxes from said light
source for a multi-beam to an image-
forming optical system;]

a first image-formation system
for focusing [a plurality of light fluxes
coupled by said coupling lens] the pair
of light beams from the light source in
a direction corresponding to auxiliary
scanning and forming [them to] the pair
of light beams into images as a plurality
of line images each [long] having a
longer side in a direction corresponding
to main scanning;

an optical deflector having a
deflecting reflection surface adjacent to
positions where [images as] said
plurality of line images are formed for
deflecting [said plurality of light fluxes]

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the pair of light beams;

a second image-formation system for separating the [plurality of light fluxes] pair of light beams deflected by said optical deflector from each other in a direction of auxiliary scanning on a scanned surface and converging the [plurality of light fluxes] pair of light beams as a plurality of light spots for optically scanning said scanned surface in accordance with deflection of the pair of light [fluxes] beams; wherein

a lateral magnification β in a direction corresponding to the auxiliary scanning [in a composite system] of the optical [system] scanner between said light source [for a multi-beam] and said scanned surface is as follows:

$$2 < \beta < 8.5$$

[and the plurality of light spots on the scanned surface optically scan scanning lines adjacent to each other].

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2. A multi-beam optical scanner

according to claim 1₁[:] wherein said light source [for a multi-beam] comprises at least two [or more] LD light emitting sections [or LED light emitting sections] monolithically provided therein.

3. A multi-beam optical scanner

according to claim 1₁[:] wherein said light source [for a multi-beam] comprises at least a pair of [two or more] LD light emitting sections [or LED light emitting sections] in [hybrid] combination [thereof].

4. A multi-beam optical scanner

according to claim 1₁[:] wherein said light source [for a multi-beam has] comprises two LD light emitting sections, [and] wherein said LD light emitting sections are provided symmetric with respect to an optical axis of a coupling lens.

5. A multi-beam optical scanner

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according to claim 1.[:] [wherein said
~~further comprising a coupling lens~~ [is a
 collimate lens] for [collimating a
 plurality of] ~~coupling a~~ light [fluxes]
~~beam~~ from said light source [for a
 multi-beam at the same time].

6. A multi-beam optical scanner
 according to claim 1,[:] wherein said
 second image-formation system
 includes a lengthy lens provided in a
 side of the scanned surface.

7. A multi-beam optical scanner
 according to claim 1,[:] wherein said
 first image-formation system comprises
 a [piece of] lens having power only in
 the auxiliary scanning direction, while
 said second image-formation system
 comprises a constant-velocity
 optical-scanning image-forming mirror
 and a lengthy lens each provided on the
 side of the scanned surface.

[8. A multi-beam optical
 scanner according to claim 1; wherein a

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lateral magnification β in a direction corresponding to the auxiliary scanning in a composite system of the optical system between said light source for a multi-beam and the scanned surface is as follows:

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$$2 < \beta \leq 8.5.]$$

9. A multi-beam optical scanner according to claim 1, wherein the second image-formation system comprises a focusing portion for focusing the plurality of light spots on the scanned surface into scanning lines that are adjacent to each other.

10. A multi-beam optical scanner according to claim 1, wherein said light source comprises at least two LED light emitting sections monolithically provided therein.

11. A multi-beam optical scanner according to claim 1, wherein said light source comprises at least a pair of LED light emitting sections in

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I combination.

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12. A multi-beam optical scanner according to claim 5, wherein said coupling lens is a collimate lens for collimating a light beam from said light source at the same time.

13. A multi-beam optical scanner comprising:

a pair of light beams;

a first image-formation system for focusing the pair of light beams from the light source in a direction corresponding to auxiliary scanning and forming the pair of light beams into images as a plurality of line images each having a longer side in a direction corresponding to main scanning;

an optical deflector having a deflecting reflection surface adjacent to positions where said plurality of line images are formed for deflecting the pair of light beams;

a second image-formation

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system for separating the pair of light beams deflected by said optical deflector from each other in a direction of auxiliary scanning on a scanned surface and converging the pair of light beams as a plurality of light spots for optically scanning said scanned surface in accordance with deflection of the pair of light beams; wherein

a lateral magnification β in a direction corresponding to the auxiliary scanning of the optical scanner is as follows:

$$2\beta < 8.5.$$

14. An image forming apparatus comprising:

a multi-beam optical scanner including:

a light source for providing a pair of light beams;

a first image-formation system for focusing the pair of light beams from the light

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source in a direction
corresponding to auxiliary
scanning and forming the pair
of light beams into images as a
plurality of line images each
having a longer side in a
direction corresponding to main
scanning:

an optical deflector
having a deflecting reflection
surface adjacent to positions
where said plurality of line
images are formed for
deflecting the pair of light
beams:

a second
image-formation system for
separating the pair of light
beams deflected by said optical
deflector from each other in a
direction of auxiliary scanning
on a scanned surface and
converging the pair of light

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beams as a plurality of light spots for optically scanning said scanned surface in accordance with deflection of the pair of light beams; wherein

a lateral magnification β in a direction corresponding to the auxiliary scanning of the optical scanner is as follows:

$$2 < \beta < 8.5.$$

15. An image forming apparatus comprising:

a multi-beam optical scanner including:

a pair of light beams;

a first image-formation system for focusing the pair of light beams in a direction corresponding to auxiliary scanning and forming the pair of light beams into images as a plurality of line images each having a longer side in a

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direction corresponding to main scanning:

an optical deflector having a deflecting reflection surface adjacent to positions where said plurality of line images are formed for deflecting the pair of light beams:

a second image-formation system for separating the pair of light beams deflected by said optical deflector from each other in a direction of auxiliary scanning on a scanned surface and converging the pair of light beams as a plurality of light spots for optically scanning said scanned surface in accordance with deflection of the pair of light beams: wherein

a lateral magnification β

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in a direction corresponding to
the auxiliary scanning of the
optical scanner is as follows:

$$2 < \beta < 8.5.$$

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